

REMARKS

The application has been amended to place it in condition for allowance at the time of the next Official Action.

As an initial matter, the undersigned appreciates with thanks the Examiner taking time to discuss this matter in multiple telephone interviews beginning from August 9, 2010.

In the interviews, it was agreed that the claims could be amended into allowable condition if particular features were clarified and recited in a more structural manner. Particularly, the Examiner identified the features of an interleaver and an interleaver memory comprising  $Q$  rows and  $N/Q$  columns, and also suggested that variables  $N$  and  $Q$  be clarified as being quantities of equivalent units.

In an exchange of draft claim language, it was agreed that claim 26, amended as above, would overcome the present art but would require a further search, and it was further agreed that a combination of claim 26 with dependent claim 27 would be allowable and would not require a further search of the art. It was further agreed that amendments to the remaining independent claims consistent with the combination of features represented by the combination of claims 26 and 27 would place those claims in condition for allowance.

The undersigned gratefully appreciates the Examiner taking the time to review draft amendments to the independent claims in advance of their submission with this paper.

There are no formal matters pending.

Amendments to the Disclosure

Claim 26 is amended, as indicated above, to incorporate the features of claim 27. Claim 26 is further amended to recite an FFT processing part configured to generate the frequency domain data, and to clarify the recitation of the variables N and Q as each reciting units of data points. The amendments to claim 26 find support in the specification and the drawing figures as originally filed (e.g., paragraphs [0055], [0057], [0062]-[0064]; original claim 30) and are not believed to introduce new matter.

Claim 27 is canceled, without prejudice.

Independent claims 36, 45, and 46 are amended in a similar manner to claim 26, described above.

The claims depending from claims 26 and 36 are amended so as to be in antecedent agreement with the amendments to the respective parent claims.

The claims are also generally amended as to form in consideration of U.S. practice and preferences.

Based in part on the conclusions drawn from the telephone interviews and e-mail exchanges with the Examiner indicated above, it is respectfully submitted that the claims have been placed into allowable condition and that the amended

claims do not raise any new issues requiring a further search of the art. It is therefore respectfully submitted that the amendments to the claims are proper. Entry of the claim amendments provided herewith is respectfully requested.

Substantive Issues - Sections 102 and 103

The Official Action rejected claims 26-40 and 42-45 under 35 USC 102(e) as being anticipated by Arivoli (US 7,170,849; "ARIVOLI").

The Official Action rejected claim 41 under 35 USC 103(a) as being unpatentable over ARIVOLI in view of Tsai (US 7,330,513; "TSAI").

The Official Action rejected claim 46 under 35 USC 103(a) as being unpatentable over ARIVOLI.

In response, it is respectfully submitted that the claims have been amended, as indicated above, in a manner believed to overcome all of the rejections over prior art.

For example, it is respectfully submitted that none of the references applied by the Official Action, individually or in combination, teaches or suggests a transmitter apparatus as recited by amended claim 26 comprising an FFT processing part, an interleaver, and an IFFT processing part, wherein the interleaver generates and outputs N data points to the IFFT processing part from Q data points inputted to the interleaver from the FFT processing part, N being greater than Q, wherein the interleaver comprises an interleaver memory having Q rows and N/Q columns,

and wherein the interleaver is configured to write  $Q$  data points received from the FFT processing part into a column of the interleaver memory, the data points of any column being associated with only one user.

On the contrary, ARIVOLI discloses that an input 206 is in the form of blocks of coded bit data. (column 4, lines 63-64), and the number of coded bits per symbols is denoted by NCBPS. (column 6, lines 2-3). Further, the output 216 of the interleaver 200 is in the form of subcarriers (also called groups) of data. (column 4, lines 64-66), and the number of bits per subcarrier is denoted by NBPSC. (column 6, lines 1-2). Hence ARIVOLI teaches that the number of the output bits per group is NBPSC. Because ARIVOLI also discloses "Each interleaver array includes 48 groups for IEEE 802.11a compatible operation," (column 6, lines 3-4), the number of the output bits is  $48 * \text{NBPSC}$  (see Table 1).

In the case of BPSK, the number of the input bits NCBPS = 48, and the number of output bits  $48 * \text{NBPSC} = 48 * 1 = 48$ , because NCBPS = 48 and NBPSC = 1. Accordingly, the number of the input bits equals the number of the output bits.

Therefore, ARIVOLI at least fails to satisfy the recitation in amended claim 26 that  $N > Q$ .

It is further respectfully submitted that neither ARIVOLI nor the remaining prior art references offered by the Official Action, individually or in combination, teach or suggest

an interleaver with an interleaver memory as recited by amended claim 26.

Accordingly, claim 26, as amended, is believed to be patentable.

It is also respectfully submitted that independent claims 36, 45, and 46, as amended, are patentable over the references applied by the Official Action at least for the same reasons as those set forth above as to claim 26.

It is further respectfully submitted that claims depending from claims 26 and 36 are patentable at least for respectively depending from patentable parent claims.

From the foregoing, it will be apparent that Applicant has fully responded to the May 28, 2010 Official Action and that the claims as presented are patentable. In view of this, Applicant respectfully requests reconsideration of the claims, as presented, and their early passage to issue.

In order to expedite the prosecution of this case, the Examiner is invited to telephone the attorney for Applicant at the number provided below if the Examiner is of the opinion that further discussion of this case would be helpful in advancing prosecution.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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